Amendments to the Specification

Please replace the paragraph at page 16, lines 22 through 26 with the following amended paragraph:

If the cryopump 104 was not in regeneration, [[than]] then at step 560, the system 120 checks to determine if the temperature of the cryopump 104 is less than 24K. If the temperature is greater than 25K, a safe purge is initiated at 600. After the safe purge is completed, at 580 the host system or user is allowed to have control of the cryopump 104.

Please replace the paragraph at page 17, lines 5 through 15 with the following amended paragraph:

Unsafe Conditions

According to an aspect of the invention, an unsafe condition is anything that could present a potential danger to the cryopump 104. For example, an unsafe condition is identified when there is a power failure in the cryogenic vacuum system 100, a temperature of the cryopump exceeds a threshold temperature level, or a faulty temperature diode in the cryopump. In general, when an unsafe condition is determined by the system 120, the gate valve 116 is closed and the cryopump 104 and exhaust line 118 are purged for a period of time, such as five minutes. During this time, the purge valves 112, 114 can be cyclically opened and closed. Also, the valves 112, 114, [[114]] 116 cannot be controlled by the host controller 106. After the safe purge is completed and the unsafe condition is corrected, the host controller 106 may control the cryopump 104.

Please replace the paragraph at page 17, line 16 through page 18, line 2:

Exceeding a Threshold Temperature

FIG. 6 is a flow diagram describing a process for determining that a temperature of a cryopump exceeds a threshold temperature. According to this aspect of the invention, the system 120 determines at step 630 that the cryopump temperature is below an operational set point, such as 18K. At step 640, the system 120 sets a flag, which indicates that the cryopump has gone below the operational set point. At step [[640]] 650 , the system 120 determines that the temperature of the cryopump has risen to a warmup set point, such as 35K. If the cryopump 104

warms up to a value greater than this parameter, the purge valves 112, 114 are allowed to open 680, and the gate valve 114 is closed, as described at step 660. During this time, at step 670 the host controller 106 is unable to control the valves 112, 114, 116. This safe purge continues for a certain time period, such as five minutes, at step 680. After the five minutes has elapsed, at step 690, the host controller 106 regains control of the valves 112, 114, 116.